New York State Athletic Commission

A Division of the New York Department of State

MEDICAL STANDARDS FOR COMBAT SPORTS PROFESSIONALS

LAST UPDATED: January 1, 2020

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INTRODUCTION

This manual is intended for the use of professional combatants, managers, trainers and promoters in New York State. It includes the medical requirements that professional combatants must meet in order to compete in New York. It also includes a number of medical policies and standards that have been adopted to protect the safety and wellbeing of combat sports professionals within the State. It contains both specific and general policies concerning health and safety as well as some procedures relevant to the administration of the Commission's duties. It is not all inclusive, and is not intended to, does not, and may not be relied upon to create any rights, substantive or procedural, enforceable at law by any party in any matter civil or criminal. Nor are any limitations hereby placed on otherwise lawful prerogatives of the Department of State or the New York State Athletic Commission.

BACKGROUND

The New York State Athletic Commission is vested with the sole direction, management, control and jurisdiction over all combat sports and sparring matches or exhibitions to be conducted, held or given within the state of New York. Within the Commission there is established the Medical Advisory Board ("MAB") which exists to prepare and submit to the Commission for approval regulations and standards for the physical examination of professional combatants. The MAB consists of nine members, appointed by the Governor. Each member of the MAB is duly licensed to practice medicine in the state of New York and has practiced medicine for at least 5 years. In addition to the MAB, the Commission has appointed a Medical Director who assists in implementing the recommendations of the MAB and advises the Commission on important matters relating to health and safety. As established by the Commission, the Medical Director (also referred to as the Chief Medical Officer) must be a NYS licensed physician for at least 5 years and board certified in neurology, neurosurgery or a closely related specialty.

PART I. MEDICAL REQUIRMENTS FOR LICENSURE

MEDICAL ELIGIBILITY OF COMBATANTS

In order to be licensed and considered medically eligible to compete in a professional MMA or boxing event in New York, a comprehensive medical evaluation process must be completed by all applicants. This process includes the following tests and examinations:

1. MRIs:

All combatants fighting in New York must take an approved MRI exam within 3 years of any bout. Unless otherwise required by the Commission, the following MRI exams are acceptable:

Type of Acceptable MRI Scan:

- 1.5 Tesla magnet (minimum) or 3 Tesla magnet

Required MRI Sequence(s):

- Susceptibility weighted imaging (SWI);
- T1 weighted images;
- T2 weighted images;
- FLAIR;
- Diffusion weighted image (DWI);
- Gradient echo (GRE)

To ensure sufficient time is available to review a combatant's MRI results, the Commission requires all MRI brain results to be submitted at least 3 days before a scheduled bout. Currently a MRI brain scan submitted to the NYSAC for medical clearance to fight and which shows evidence of prior TBI is grounds for disqualification of the fighter and denial of license to fight in New York State.

2. ELECTROCARDIOGRAM (EKG):

An EKG or electrocardiogram is a test that checks for problems with the electrical activity of your heart. It is conducted by placing electrical leads on various parts of the patient's body while a machine records and measures the heartbeats. Once the test is finished the results are printed on a special chart which records the information in sharp spikes which are reviewed by medical professionals. Since EKGs provide valuable information about a combatant's heart health, the Commission requires all combatants to have a 12-Lead EKG at least once within 12 months of competing in New York. To ensure sufficient time is available to review a combatant's EKG results, the Commission requires all EKG results to be submitted at least 3 days before a scheduled bout.

3. DILATED EYE EXAMINATION:

All combatants fighting in New York must demonstrate sufficient eye health. Having healthy eyes is necessary as otherwise a combatant might not be able to adequately defend him/herself in the ring. To prevent against unnecessary injuries, the MAB and the Commission require dilated eye examinations performed by an ophthalmologist (must be done within a year of competing in New York). To ensure sufficient time is available to review a combatant's eye examination results, the Commission requires all eye results to be submitted at least 3 days before a scheduled bout.

In addition to requiring dilated examinations, the MAB and the Commission have established the following policies regarding eye health:

- Combatants who have had surgeries which alter the structural integrity of the globe are contraindicated for participation in combat sports and will not be permitted to compete. Such surgeries include, but are not limited to: cataract surgery, implantation of intraocular artificial lenses devices;
- Combatants who have had Lasik surgery where a lens flap is created are not permitted to compete;
- Combatants who have had radial keratotomy are not permitted to compete;
- Combatants must not present with "Major Ocular Pathologies" such as:
    - Anterior Chamber Angle Abnormalities;
    - Glaucoma;
    - Lens Abnormalities;
    - Peripheral Retinal Abnormalities;
    - Macular Abnormalities;
    - Diplopia or Extraocular Muscle Palsy;
    - Active Inflammation.
- Combatants must have uncorrected visual acuity of 20/200 or better in each eye;
- Combatants must have corrected visual acuity of 20/40 or better in each eye;
- Combatants with red green color blindness can compete after obtaining medical clearance to fight from an ophthalmologist.

4. BLOOD TESTING:

For the safety of all competitors appearing in New York, the Commission requires each combatant to undergo various tests to determine the presence of certain communicable diseases and/or other conditions which are contraindicated for combat sports.

The following tests must be completed before being eligible to compete in New York:

- Hepatitis B (must be done within a year of competing in New York);
- Hepatitis C (must be done within a year of competing in New York);
- HIV (must be done within a year of competing in New York);
- CBC with platelet count (must be done within a year of competing in New York);
- Pregnancy test (*female combatant only – must be done within 30 days of competing in New York).

To ensure sufficient time is available to review a combatant's blood results, the Commission requires all blood work be submitted at least 5 days before a scheduled bout. The Chief Medical Officer may request the combatant to undergo additional testing and/or more frequent testing on a case-by-case basis.

5. URINE TESTING:

The use of illicit substances and Performance Enhancing Drugs (PEDs) presents a grave and growing threat to the integrity of athletic competition within the combat sports industry. The Commission is in the process of formulating a comprehensive drug testing policy for combat athletes who fight under the jurisdiction of the NYSAC. Currently all combatants fighting in the State undergo mandatory urine testing for examination of prohibited substances. The urine testing is performed by the Commission at the combat sports event under the supervision of an appointed inspector. Combatants are not permitted to glove up until the required urine collection is completed. A combatant who violates the Commission's policy on banned substances may be subject to fines, suspensions, revocation of a license/permit, forfeiture of his/her purse and may have the result of a contest changed to a "no-contest."

6. PHYSICAL EXAMINATION:

In addition to the foregoing, all professional combatants fighting in New York must undergo physical examinations, including neurological and neuropsychological examinations that indicate medical fitness.

Combatant physical examinations are generally performed at the weigh-in for each professional event. Each time a combatant fights in New York, the combatant will undergo a comprehensive full physical examination, conducted by a Commission appointed doctor.

After the weigh-in, a combatant will also be examined by a ring-side physician immediately before the bout to ensure that there are no changes to the fighter's health. A similar examination will also occur following each bout or if needed during the bout itself. A combatant may be denied a license/permit and/or suspended as a result of any abnormal findings during any such examinations.

7. HIGH-RISK COMBATANTS

As competing in combat sports is highly physically demanding, the MAB and the Commission have established heightened screenings for certain combatants who fall into high-risk categories. A High-Risk Combatant is a combatant who falls into any one, or more, of the following categories:

- 40+ years old;
- 6 consecutive losses in any manner in any professional combat sport;
- 3 consecutive losses by TKO/KO;
- 1+ year(s) of inactivity after start of professional career;
- 10 losses or more as a professional combatant;

For any combatant who falls into one, or more, of these categories, additional testing to assess cardiovascular and neurological fitness to fight may include:

1. Magnetic Resonance Imaging (MRI) of the brain with susceptibility weighted imaging (SWI) or gradient echo imaging (GRE).

2. Magnetic Resonance Angiogram (MRA) of the Brain.

3. Neurological evaluation performed by a neurologist.

4. Formal neurocognitive testing either via a neuropsychologist (pen and paper testing) or computerized testing such as ImPACT with a notation if any deterioration from the baseline (first) assessment (if available). For non-English speaking combatants, interpreter mediated testing or testing in native language is acceptable.

5. Cardiac evaluation performed by a primary care physician/ internist with referral to cardiologist if needed.

6. Additional blood work including a complete blood count (CBC) with platelet count and complete metabolic panel (SMA20) which includes hepatic tests, blood urea nitrogen, creatinine and glucose, lipid profile, thyroid profile.

CHART I - MEDICAL ELIGIBILITY FOR LICENSURE

Required Test	Additional Information
Brain MRI Scan with a 1.5 or greater Tesla Magnet. Required MRI Sequence(s): • Susceptibility weighted imaging (SWI); • T1 weighted images; • T2 weighted images; • FLAIR; • Diffusion weighted image (DWI); • Gradient echo (GRE)	Every three (3) years or as required by NYSAC Chief Medical Officer.
Electrocardiogram (EKG): • 12 Lead	Every twelve (12) months or as required by NYSAC Chief Medical Officer. Not more than one year (365 days) prior to any contest or exhibition.
Dilated eye examination: • By a licensed ophthalmologist (Must be an MD or a DO)	Every twelve (12) months or as required by NYSAC Chief Medical Officer. Not more than one year (365 days) prior to any contest or exhibition.
Blood testing: • HIV serology • Hepatitis B – surface antigen • Hepatitis C – antibody • CBC with platelet count • Pregnancy test (*women only)	Every twelve (12) months or as required by NYSAC Chief Medical Officer. Not more than one year (365 days) prior to any contest or exhibition. *Pregnancy test must be conducted not more than thirty days (30) prior to any contest or exhibition.
Urine testing: • Urine samples for illegal drugs	See below
Physical: • Conducted by NYSAC Panel Physician.	See below

- All of these tests must be approved by the CMO/ACMO prior to final medical clearance of the applicant.
- In the event that a test result is abnormal the candidate may need to undergo additional medical assessments/clearances.
- Special guidelines are in place when considering the “high risk” combatant (see above)
- When considering candidates who submit medical evaluations written in a language other than English, special guidelines exist to ensure that this information is translated appropriately and is not misconstrued.

NYSAC MEDICAL TEAM PROCEDURES ON FIGHT DAY

1. The medical team comprises of the Chief Medical Officer (CMO), Assistant Chief Medical Officer (ACMO) and 3 to 5 experienced ringside physicians.

2. In addition to the medical team, an EMS team with an ambulance is present at the venue.

3. The medical team performs a full physical at the time of the weigh in to determine the combatants' fitness to fight.

4. A more abridged physical evaluation is performed on fight day (pre-fight physical).

5. A ringside physician shall step up to the ring canvas/ enter the cage in-between each round to check the fighter.

6. A member of the medical team may signal the referee to call a time out to assess a fighter if needed.

7. After the fight, the combatants are examined by members of the medical team for any injuries before they are cleared for discharge.

8. All fighters need to obtain final medical clearance after a fight before they can receive their monies from the Commission.

PART II. ADDITIONAL MEDICAL POLICIES AND STANDARDS

BANNED SUBSTANCES:

All combatants appearing in New York are required to undergo mandatory drug testing for both illicit and unlawful substances. In addition to substances which are prohibited by the New York Health Laws and Penal Laws the please see **Appendix A for NYSAC's Prohibited List.**

The use of illicit substances and Performance Enhancing Drugs (PED) presents a grave and growing threat to the integrity of athletic competition within the combat sports industry. The use of illicit substances and PEDs in professional combat sports is strictly prohibited by the New York State Athletic Commission. To deter and combat illicit substance and PED use in professional combat sports, the Commission shall seek administrative license revocation, medical suspension, purse forfeiture, and additional fines in any instance in which a professional combatant engages in dopingand/or illicit drug use.

The New York State Athletic Commission does not recognize a therapeutic use exemption (TUE)for testosterone replacement therapy.

Combatants are not to use any drugs, medications, and supplements between the time of the weigh-in physical and the conclusion of the combative sport event unless the combatant has provided notice tothe New York State Athletic Commission (NYSAC) and received written approval.

The use of intravenous fluids for hydration prior to the event is not allowed unless the combatant has provided notice to the New York State Athletic Commission (NYSAC) and received written approval.

NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS) POLICY:

Combatants participating in a combative sport event should avoid the use of non-topical non-steroidal anti-inflammatories (NSAIDS) within one (1) week of a combative sport event because of a potential increased risk of bleeding. Caution should also be exercised regarding the use of NSAIDS while actively sparring. Use of NSAIDS within one week of a combative sport event may result in cancellation of the match. Drugs that are considered NSAIDS include but are not limited to:

- ARTHROTEC
- ASPIRIN (Ecotrin, Empirin, Halfprin, Bayer, Anacin, Zorprin, Excedrin, Bufferin)
- CHOLINE MAGNESIUM TRISALICYLATE (Trilisate)
- DICLOFENAC (Voltaren, Voltaren XR, Cataflam, Flector, Voltaren Rapide)
- DIFLUNISAL (Dolobid)
- ETODOLAC (Ultradol)
- FENOPROFEN (Nalfon)
- FLURBIPROFEN (Ansaid, Froben, Froben SR)
- IBUPROFEN (Motrin, Advil, Nuprin, Rufen, Neoprofen)
- INDOMETHACIN (Indocin, Indocin SR, Indocin IV, Indocid)
- KETOPROFEN (Orudis, Orudis KT, Actron, Oruvail, Orudis SR)
- KETORALAC (Toradol)
- MECLOFENAMATE
- MEFENAMIC ACID (Ponstel, Ponstan)
- MELOXICAM (Mobic, Mobicox)
- NABUMETONE (Relafen)
- NAPROXEN (Naprosyn, Aleve, Anaprox, EC-Naprosyn, Naprelan)
- OXAPROZIN (Daypro)

If unsure whether a painkiller is an NSAID, the combatant is advised to contact the NYSAC prior to ingestion of drug.

ORTHOPEDIC BRACES AND SLEEVES:

Orthopedic braces are not permitted for in-use competition due to the risk of injury caused by incidental contact. Combatants must be medically cleared to compete without such braces.

KNEE SLEEVES (BOXING):

Combatants are permitted to wear a knee sleeve during a bout under the following conditions: (1) the combatant receives no competitive advantage from wearing the sleeve; (2) the knee sleeve does not pose any danger to the combatant's opponent; and (3) the combatant without the knee sleeve is found medically fit to compete by the physician appointed by the Commission to examine the combatant prior to the scheduled bout.

KNEE AND ANKLE SLEEVES (MMA):

Combatants are permitted to wear a knee and/or ankle sleeve during a bout under the following conditions: (1) the combatant receives no competitive advantage from wearing the sleeve; (2) the sleeve does not pose any danger to the combatant's opponent; and (3) the combatant without the sleeve is found medically fit to compete by the physician appointed by the Commission to examine the combatant prior to the scheduled bout. Elbow sleeves are not permitted.

In order for the Commission to properly evaluate a knee sleeve that a combatant wishes to wear during a bout (boxing or MMA), the combatant or combatant's representative must present such knee sleeve to the Commission in a timely manner.

In order for the Commission to properly evaluate an ankle sleeve that a combatant (MMA) wishes to wear during a bout, the combatant or combatant's representative must present such ankle sleeve to the Commission in a timely manner.

BREAST IMPLANTS:

Combatants with breast implants are allowed to fight. Combatants need to acknowledge the risk of rupture of breast implants during the fight. If a rupture is suspected, the combatant is advised to follow up with a plastic surgeon as soon as possible.

COSTS AND FEES FOR TESTING:

One of the primary functions of the Commission is to ensure the health and safety of those who participate in a combat sport professionally within the State. State Law requires that certain costs and fees for medical testing be borne by the promoter. For more information regarding specific tests and/or approved facilities please contact the Commission at (212) 417-5700.

CYSTS:

Clinical literature suggests that large middle cranial fossa arachnoid cysts are associated with an increased risk of intracranial hemorrhage. Evidence regarding increased risks associated with other arachnoid cysts (i.e., small anterior or middle cranial fossa cysts or posterior fossa cysts of any size) is unknown. It is proposed that combatants with large middle cranial fossa cysts (as determined clinically) will not be allowed to compete in New York State. Determination of medical licensure for combatants with other types of arachnoid cysts will be assessed on a case by case basis taking into consideration location, size, mass effect, prior hemorrhage and relative compression of adjacent structures.

FLUIDS AT RINGSIDE

It is a well-known fact that combat sport participation is physically demanding and requires athletes to perform at extremely high levels. To combat dehydration while competing, a very serious concern for combatants, the MAB and the Commission recognize that a combatant should have access to fluids at ringside. As not all fluids combat dehydration, the MAB and the Commission limit fluids at ringside only to authorized bottled water. Water must be in a sealed bottle and remain unopened until ringside.

The use of IV fluids from the time of the weigh until the event is prohibited other than for medical reasons, and that too, after the permission of the NYSAC medical committee.

GONAD PROTECTION:

Gonads are the primary reproductive organs in both male and female combatants. Because these sensitive areas can sustain serious blunt trauma during the course of a bout, the MAB and the Commission require all combatants to wear appropriate gonad protection while competing.

HEAD INJURIES:

One of the most traumatic injuries a combatant can sustain in the ring, or the octagon is a head injury. To prevent serious injuries to combatants, the MAB and the Commission have established the following testing protocols and procedures for combatants fighting in New York:

- Combatants in high- risk categories may be required to undergo additional advanced neuro-imaging;
- Combatants who have sustained serious traumatic brain injuries are not eligible to compete;
- Combatants fighting in New York must take an acceptable MRI scan demonstrating the absence of a head injury;
- Any combatant rendered unconscious or suffering head trauma as determined by the attending physician shall be immediately examined by the attending commission physician and shall be required to undergo neurological and neuropsychological examinations by a neurologist including but not limited to a computed tomography or medically equivalent procedure.

HEARING IMPAIRED COMBATANTS:

During a combat sports event there are often numerous instances wherein an auditory signal is critical to the proper control of a bout. These include but may not be limited to: signaling when a round is nearing the end, when a round or bout has concluded and when the referee or another Commission official is providing instructions. For these reasons, partially hearing-impaired combatants may compete on an individual basis subject to appropriate audiological testing; combatants who are totally impaired are not permitted to compete.

MEDICAL SUSPENSIONS AND PROHIBITIONS:

From time to time it is necessary for the Commission to issue medical suspensions so that combatants remain healthy and can compete in the future. While many suspensions occur at a fight based on individual circumstances there are certain cases wherein a suspension is mandatory. While not exhaustive, the following suspensions will be issued by the Commission as is needed and as appropriate:

- Presence of a banned substance (see, banned substance and urine testing sections of this Manual).
- All combatants after a fight get a mandatory administrative suspension for 7 days. This is done to safeguard the health of combatants and ensure that they get time to recover physically after a fight.
- For KOs and TKOs due to head blows, combatants may get suspensions ranging from a minimum of 30 days to a maximum of 90 days or more at the discretion of the supervising ringside physician. The ringside physician shall also request clearance from a neurologist prior to return to competition.
- For other injuries such as lacerations, orthopedic and ophthalmological injuries, combatants may get suspensions ranging from a minimum of 30 days to a maximum of 90 days or more at the discretion of the supervising ringside physician. The ringside physician may also request medical clearance from different specialists such as primary care physician, ophthalmologist, orthopedic physician among others prior to a return to competition.
- All suspensions are to remain in effect until medically cleared by the Commission.

In addition to suspensions, there are also certain restrictions on combatants which prevent them from competing in New York. These additional restrictions include:

- Excessive weight loss – Combatants are not permitted to lose more than 1% of their body weight within 24 hours of a bout;
- Excessive rounds – Combatants are not permitted to compete within 7 days of their last professional bout.

NEPHRECTOMIES:

A nephrectomy is the surgical procedure of removing a kidney or section of a kidney. Combatants who have had nephrectomies may be permitted to compete on an individual basis subject to additional testing and clearance from the combatant's nephrologist.

NEUROLOGICAL DISORDERS:

Neurologic diseases are disorders of the brain, spinal cord and nerves throughout your body. According to the US National Library of Medicine and the National Institutes of Health there are over 600 different diagnosable neurological disorders. Because these disorders can affect a combatant's ability in the ring or cage the MAB and the Commission have determined that combatants with certain chronic neurological diseases are ineligible to compete. Determination of medical licensure in combatants with neurological disorders will be assessed on a case by case basis.

RINGSIDE PHYSICIANS:

For every combat sports event within the State, the Commission appoints a sufficient number of ringside physicians based, in part, on the number of matches during an event. All ringside doctors are approved by the MAB and their qualifications are reviewed annually. In addition, all ringside physicians are required to attend training seminars as specified and approved by the Commission after consultation with the MAB. All ringside physicians are expected to remain in CME compliance and hold a valid and unrestricted New York State medical license.

During a match the ringside physician has the authority to terminate any combat sports match or exhibition if, in the opinion of such physician any contestant has received severe punishment or is in danger of serious physical injury. In the event of any serious physical injury, the physician shall immediately render any emergency treatment necessary, recommend further treatment or hospitalization if required, and fully report the entire matter to the Commission within 24 hours and if necessary, subsequently thereafter. The physician may also require that the injured combatant and his manager remain in the ring or on the premises or report to a hospital after the contest for such period of time as such physician deems advisable.

VASCULAR MALFORMATIONS:

Vascular malformations are developmental abnormalities in the body's vascular system. These malformations can fall into several different types of sub-categories. While these malformations are relatively common some may cause hemorrhages, seizures and/or headaches. In addition, certain formations may increase the risk of inter-cranial hemorrhage following trauma. The MAB and the Commission have therefore determined that combatants with vascular malformations on their MRI scans are not eligible to compete.

VENOUS ANOMALIES:

Venous anomalies affect the normal variant of venous drainage in the body. Venous anomalies do not always affect the structural integrity of blood vessels. The MAB and the Commission have therefore determined that combatants with venous anomalies may be permitted to fight on a case-by-case basis after reviewing the combatant's entire medical file.

WEIGHT LOSS:

Combatants sometimes lose excessive weight to "pass the scale." Too much weight loss can be detrimental to that combatant's health. By rule, combatants are not permitted to lose more than 1% of their body weight within 24 hours of a bout.

A Division of the New York Department of State

MEDICAL STANDARDS FOR COMBAT SPORTS PROFESSIONALS

APPENDIX A

The New York State Athletic Commission (NYSAC) Prohibited Drug List

The use of illicit substances and Performance Enhancing Drugs (PED) presents a grave and growing threat to the integrity of athletic competition within the combat sports industry. Doping in combat sport is a serious offense. Doping by combat sport athletes threatens not only their health and the fairness to competitors, but also the health and safety of the opponent and the integrity of the sport itself. Intentional doping is cheating. The use of illicit substances and PEDs in professional combat sports is strictly prohibited by the New York State Athletic Commission. To deter and combat illicit substance and PED use in professional combat sports, the Commission shall seek administrative license revocation, medical suspension, purse forfeiture, and additional fines in any instance in which a professional combatant engages in doping and/or illicit drug use. All combatants appearing in New York are required to undergo mandatory drug testing for both illicit and unlawful substances.

"Prohibited In-Competition" means the period commencing just before midnight (11:59 p.m.) on the day before the scheduled weigh-in for the competition in which the athlete is scheduled to compete until the conclusion of the athlete's bout.
"Prohibited At All Times" means that the substance or method is prohibited both In- and Out-of-Competition".
In addition to substances which are prohibited by New York Health and Penal Laws the following **"Prohibited List"** represents substances and methods prohibited by the New York State Athletic Commission.

1. NON-APPROVED SUBSTANCES (PROHIBITED AT ALL TIMES)

Any pharmacological substance which is not addressed in this "Prohibited List" and with no current approval by any governmental regulatory health authority for human therapeutic use (e.g., drugs under pre-clinical or clinical development or discontinued, designer drugs, substances approved only for veterinary use) is prohibited at all times. Non-approved substances cover many different substances including but not limited to BPC-157.

2. ANABOLIC AGENTS (PROHIBITED AT ALL TIMES)

ANABOLIC ANDROGENIC STEROIDS (AAS) are synthetic derivatives of the male hormone testosterone. They can exert strong effects on the human body that may be beneficial for athletic performance. The available scientific literature describes that short-term administration of these drugs by athletes can increase strength and bodyweight. Strength gains of about 5-20% of the initial strength and increments of 2-5 kg bodyweight, that may be attributed to an increase of the lean body mass, have been observed.

AAS when administered exogenously, and all other substances with similar chemical structure or similar biological effects, are prohibited at all times, including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
19-Norandrostenediol	Abnormal at levels greater than 2.5 ng/mL	None
19-Norandrostenedione	Abnormal at levels greater than 2.5 ng/mL	None
1-Androstenediol	Abnormal at any detectable level	None

1-Androstenedione	Abnormal at any detectable level	None
1-Androsterone	Abnormal at any detectable level	None
1-Epiandrosterone	Abnormal at any detectable level	None
1-Testosterone	Abnormal at any detectable level	None
4-Androstenediol	Abnormal at any detectable level	None
4-Hydroxytestosterone	Abnormal at any detectable level	None
5-Androstenedione	Abnormal at any detectable level	None
7α-Hydroxy-DHEA	Abnormal at any detectable level	None
7β-Hydroxy-DHEA	Abnormal at any detectable level	None
7-Keto-DHEA	Abnormal at any detectable level	None
Androstanolone	Abnormal when T/E Ratio > 4	None
Androstenediol	Abnormal when T/E Ratio > 4	None
Androstenedione	Abnormal when T/E Ratio > 4	None
Bolasterone	Abnormal at any detectable level	None
Boldenone	Abnormal at levels greater than 5 ng/mL	None
Boldione	Abnormal at any detectable level	None
Calusterone	Abnormal at any detectable level	None
Clostebol	Abnormal at any detectable level	None
Danazol	Abnormal at any detectable level	None
Dehydrochlormethyltestosterone	Abnormal at levels greater than 0.1 ng/ml	None
Desoxymethyltestosterone	Abnormal at any detectable level	None
Drostanolone	Abnormal at any detectable level	None
Epiandrosterone	Abnormal when T/E Ratio > 4	None
Epi-dihydrotestosterone	Abnormal when T/E Ratio > 4	None
Epitestosterone	Abnormal when T/E Ratio > 4	None
Ethylestrenol	Abnormal at any detectable level	None
Fluoxymesterone	Abnormal at any detectable level	None
Formebolone	Abnormal at any detectable level	None
Furazabol	Abnormal at any detectable level	None
Gestrinone	Abnormal at any detectable level	None
Mestanolone	Abnormal at any detectable level	None
Mesterolone	Abnormal at any detectable level	None
Metandienone	Abnormal at any detectable level	None
Metenolone	Abnormal at any detectable level	None
Methandriol	Abnormal at any detectable level	None
Methasterone	Abnormal at any detectable level	None
Methyl-1-testosterone	Abnormal at any detectable level	None
Methylclostebol	Abnormal at any detectable level	None
Methyldienolone	Abnormal at any detectable level	None
Methylnortestosterone	Abnormal at any detectable level	None
Methyltestosterone	Abnormal at any detectable level	None
Metribolone	Abnormal at any detectable level	None
Mibolerone	Abnormal at any detectable level	None

Nandrolone	Abnormal at levels greater than 2.5 ng/mL	None
Norboletone	Abnormal at any detectable level	None
Norclostebol	Abnormal at any detectable level	None
Norethandrolone	Abnormal at any detectable level	None
Oxabolone	Abnormal at any detectable level	None
Oxandrolone	Abnormal at any detectable level	None
Oxymesterone	Abnormal at any detectable level	None
Oxymetholone	Abnormal at any detectable level	None
Prasterone	Abnormal when T/E Ratio > 4	None
Prostanozol	Abnormal at any detectable level	None
Quinbolone	Abnormal at any detectable level	None
Stanozolol	Abnormal at any detectable level	None
Stenbolone	Abnormal at any detectable level	None
Testosterone	Abnormal when T/E Ratio > 4	None
Tetrahydrogestrinone	Abnormal at any detectable level	None
Trenbolone (Epitrenbolone)	Abnormal at levels greater than 0.2 ng/ml	None

OTHER ANABOLIC AGENTS Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Clenbuterol	Abnormal at any detectable level	None
Osilodrostat	Abnormal at any detectable level	None
Selective androgen receptor modulators (SARMS)		
Andarine	Abnormal at any detectable level	None
Enobosarm (Ostarine)	Abnormal at levels greater than 0.1 ng/ml	None
LGD-4033 (Ligandrol)	1/1000 of relative concentration of pooled urine excretion urine standard	None
RAD 140	Abnormal at any detectable level	None
S-1 SARM	Abnormal at any detectable level	None
S-23 SARM	Abnormal at any detectable level	None
S-9 SARM	Abnormal at any detectable level	None
Tibolone	Abnormal at any detectable level	None
Zeranol	Abnormal at levels greater than 1 ng/ml	None
Zilpaterol	Abnormal at levels greater than 1 ng/ml	None

Clenbuterol (also referred to as “clen”: is a sympathomimetic amine used by sufferers of breathingdisorders as a decongestant and bronchodilator. Athletes often claim food (meat) contamination).

Androgen doping may be either direct or indirect. Direct androgen doping involves administration of synthetic androgens whereas indirect androgen doping includes a variety of non-androgenic drugs which increase endogenous T. Direct androgen doping originally involved all pharmaceutically marketed synthetic androgens but has extended

to non-marketed designer and nutraceutical androgens as well as exogenous administration of natural androgens (T, DHT) and pro-androgens (androstenedione, DHEA). Indirect androgen doping involves use of hCG, LH, anti-estrogens (estrogen receptor blockers, aromatase inhibitors), opiate antagonists and neurotransmitters involved in neuroendocrine regulation of endogenous LH and T secretion.

Distinguishing between the exogenous and endogenous steroids: Administration of natural androgens(T or DHT) or pro-androgens (androstenedione, DHEA), raises the problem of distinguishing between the exogenous and endogenous steroids. Exogenous T administration can be detected by the urine T/E ratio, the ratio in urine of T to its 17α-epimer epitestosterone (E). Both T and E are co-secreted by Leydig cells and excreted in urine consistently so that the urine T/E is usually stable for any individual over time, beingtypically around 1. Administration of exogenous T, which is not converted to E, increases the urine T/E ratioand, when it exceeds a specified threshold, is evidence for administration of exogenous T. The urine T/E ratio thresholds were originally population-based, set initially at 6 and then subsequently lowered to 4. These considerations have led to establishment of the steroid module of the Athletes Biological Passport (ABP), a compendium of serial observation of any individual's tests which creates adaptive individual- specific T/E ratio threshold. This substitution of an individual's own person-specific, in place of the population-based, thresholds allow for more sensitive and accurate detection of individual deviations in urine T/E ratio as evidence of T doping.

3. PEPTIDE HORMONES, GROWTH FACTORS, RELATED SUBSTANCES AND MIMETICS (PROHIBITED AT ALL TIMES)

Most peptide hormones are classified as either amino acid–based hormones (amine, peptide, or protein) or steroid hormones. Growth factors are naturally occurring substances capable of stimulating cellular growth, proliferation, healing, and cellular differentiation. Usually they are protein or a steroid hormone. Growth factors are important for regulating a variety of cellular processes.
The following substances, and other substances with similar chemical structure or similar biological effect(s), are prohibited.

ERYTHROPOIETINS (EPO) AND AGENTS AFFECTING ERYTHROPOIESIS. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Erythropoietin receptor agonists	Abnormal at any detectable level	None
Darbepoietins (dEPO)	Abnormal at any detectable level	None
Erythropoietins (EPO)	Abnormal at any detectable level	None
EPO Based Constructs	Abnormal at any detectable level	None
EPO-Fc	Abnormal at any detectable level	None
Methoxy polyethylene glycol-epoetin beta (CERA)	Abnormal at any detectable level	None
EPO-Mimetic Agents and their constructs	Abnormal at any detectable level	None
CNTO-530	Abnormal at any detectable level	None
Peginesatide	Abnormal at any detectable level	None
Hypoxia-Inducible Factor (HIF) Activating Agents	Abnormal at any detectable level	None
Cobalt	Abnormal at any detectable level	None
Daprodustat	Abnormal at any detectable level	None
IOX2	Abnormal at any detectable level	None

Molidustat	Abnormal at any detectable level	None
Roxadustat	Abnormal at any detectable level	None
Vadadustat	Abnormal at any detectable level	None
Xenon	Abnormal at any detectable level	None
Gata Inhibitors	Abnormal at any detectable level	None
K-11706	Abnormal at any detectable level	None
Transforming Growth Factor Beta (TGF-β) Signalling Inhibitors	Abnormal at any detectable level	None
Luspatercept	Abnormal at any detectable level	None
Sotatercept	Abnormal at any detectable level	None
Innate Repair Receptor Agonists	Abnormal at any detectable level	None
Asialo EPO	Abnormal at any detectable level	None
Caramaylated EPO (CEPO)	Abnormal at any detectable level	None

PEPTIDE HORMONES AND THEIR RELEASING FACTORS. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Corionic Gonadotrophin (CG) and Luteinizing Hormone (LH) and their releasing factors in males	Abnormal at any detectable level in males	None
Buserelin	Abnormal at any detectable level in males	None
Deslorelin	Abnormal at any detectable level in males	None
Gonadorelin	Abnormal at any detectable level in males	None
Goserelin	Abnormal at any detectable level in males	None
Leuprorelin	Abnormal at any detectable level in males	None
Nafarelin	Abnormal at any detectable level in males	None
Triptorelin	Abnormal at any detectable level in males	None
Corticotrophins and their releasing factors	Abnormal at any detectable level	None
Corticorelin	Abnormal at any detectable level	None
Growth Hormone (GH) and its analogues and fragments	Abnormal at any detectable level	None
AOD-9604	Abnormal at any detectable level	None
hGH 176-191	Abnormal at any detectable level	None
Lonapegsomatropin	Abnormal at any detectable level	None
Somapacitan	Abnormal at any detectable level	None
Somatrogon	Abnormal at any detectable level	None
Growth Hormone Releasing Factors	Abnormal at any detectable level	None
Growth Hormone-Releasing Hormone (GHRH) and its	Abnormal at any detectable level	None

Analogues		
CJC-1295	Abnormal at any detectable level	None
CJC-1293	Abnormal at any detectable level	None
Sermorelin	Abnormal at any detectable level	None
Tesamorelin	Abnormal at any detectable level	None
Growth Hormone Secretagogues (GHS) and its mimetics	Abnormal at any detectable level	None
Lenomorelin (ghrelin)	Abnormal at any detectable level	None
Anamorelin	Abnormal at any detectable level	None
Ipamorelin	Abnormal at any detectable level	None
Macimorelin	Abnormal at any detectable level	None
Tabimorelin	Abnormal at any detectable level	None
GH-Releasing Peptides (GHRPs)	Abnormal at any detectable level	None
Alexamorelin	Abnormal at any detectable level	None
GHRP-1	Abnormal at any detectable level	None
GHRP-2 (pralmorelin)	Abnormal at any detectable level	None
GHRP-3	Abnormal at any detectable level	None
GHRP-4	Abnormal at any detectable level	None
GHRP-5	Abnormal at any detectable level	None
GHRP-6	Abnormal at any detectable level	None
Hexarelin (examorelin)	Abnormal at any detectable level	None

GROWTH FACTORS AND GROWTH FACTOR MODULATORS. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Fibroblast Growth Factors (FGFs)	Abnormal at any detectable level	None
Hepatocyte Growth Factors (HGF)	Abnormal at any detectable level	None
Insulin-like Growth Factor-1 (IGF-1) and its analogues	Abnormal at any detectable level	None
Mechano Growth Factors (MGFs)	Abnormal at any detectable level	None
Platelet-Derived Growth Factors (PDGF)	Abnormal at any detectable level	None
Thymosin-β4 and its derivatives e.g., TB-500	Abnormal at any detectable level	None
Vascular-Endothelial Growth Factor (VEGF)	Abnormal at any detectable level	None

GONADOTROPIN RELEASING FACTOR

hCG	Abnormal at levels greater 5.0 IU/L	None

And all other growth factors or growth factor modulators affecting muscle, tendon or ligament protein synthesis/degradation, vascularization, energy utilization, regenerative capacity or fiber type switching.

4. BETA-2 AGONISTS (PROHIBITED AT ALL TIMES)

β_2 adrenergic receptor agonists, also known as adrenergic β_2 receptor agonists, are a class of drugs that act on the β_2 adrenergic receptor. Like other β adrenergic agonists, they cause smooth muscle relaxation and are used as mainstay treatments for respiratory diseases such as bronchial asthma and chronic obstructive pulmonary disease (COPD).

All selective and non-selective beta-2 agonists including all optical isomers are prohibited. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Arformoterol	Abnormal at any detectable level	None
Fenoterol	Abnormal at any detectable level	None
Formoterol	Abnormal at levels greater than 40 ng/mL	Inhaled formoterol: max. dose of 54 micrograms over 24 hours
Higenamine	Abnormal at any detectable level	None
Indacaterol	Abnormal at any detectable level	None
Levosalbutamol	Abnormal at any detectable level	None
Olodaterol	Abnormal at any detectable level	None
Procaterol	Abnormal at any detectable level	None
Reproterol	Abnormal at any detectable level	None
Salbutamol	Abnormal at levels greater than 1,000 ng/mL	inhaled salbutamol: max. 1600 micrograms over 24 hours in divided doses not to exceed 600 micrograms over 8 hours starting from any dose
Salmeterol	Abnormal at levels greater than 10 ng/mL	Inhaled salmeterol: max. 200 micrograms over 24 hours
Terbutaline	Abnormal at any detectable level	None
Tretoquinol (trimetoquinol)	Abnormal at any detectable level	None
Tulobuterol	Abnormal at any detectable level	None
Vilanterol	Abnormal at any detectable level	Inhaled vilanterol: max. 25 micrograms over 24 hours

NOTE: The presence in urine of salbutamol in excess of 1000 ng/mL or formoterol in excess of 40 ng/mL is not consistent with therapeutic use of the substance and will be considered a doping violation unless the athlete proves, through a control pharmacokinetic study, that the abnormal result was the consequence of a therapeutic dose (by inhalation) up to the maximum dose indicated above.

5. HORMONE AND METABOLIC MODULATORS (PROHIBITED AT ALL TIMES).

Metabolic modulators are a newer class of drugs that benefit these patients by modulating cardiac metabolism without altering hemodynamics. Selective estrogen receptor modulators, called SERMs for short, block the effects of estrogen in the breast tissue.

The following hormone and metabolic modulators are prohibited.

AROMATASE INHIBITORS. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES

2-Androstenol	Abnormal at any detectable level	None
2-Androstenone	Abnormal at any detectable level	None
3-Androstenol	Abnormal at any detectable level	None
3-Androstenone	Abnormal at any detectable level	None
4-Androstene-3,6,17 trione	Abnormal at any detectable level	None
Aminoglutethimide	Abnormal at any detectable level	None
Anastrozole	Abnormal at any detectable level	None
Androsta-1,4,6-triene-3,17-dione	Abnormal at any detectable level	None
Androsta-3,5-diene-7,17-dione	Abnormal at any detectable level	None
Exemestane	Abnormal at any detectable level	None
Formestane	Abnormal at levels greater than 50 ng/mL	None
Letrozole	Abnormal at any detectable level	None
Testolactone	Abnormal at any detectable level	None

ANTI-ESTROGENIC SUBSTANCES (ANTI-ESTROGENS AND SELECTIVE ESTROGEN RECEPTOR MODULATORS (SERMS)). Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Bazedoxifene	Abnormal at any detectable level	None
Ospemifene	Abnormal at any detectable level	None
Raloxifene	Abnormal at any detectable level	None
Tamoxifen	Abnormal at any detectable level	None
Toremifene	Abnormal at any detectable level	None
Clomifene	Abnormal at levels greater than 0.1 ng/ml	None
Cyclofenil	Abnormal at any detectable level	None
Fulvestrant	Abnormal at any detectable level	None

AGENTS PREVENTING ACTIVIN RECEPTOR IIB ACTIVATION. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Activin A-neutralizing antibodies	Abnormal at any detectable level	None
Activin receptor IIB competitors	Abnormal at any detectable level	None
Decoy activin receptors (e.g., ACE-031)	Abnormal at any detectable level	None
Anti-activin receptor IIB antibodies	Abnormal at any detectable level	None
Bimagrumab	Abnormal at any detectable level	None
Myostantin inhibitors	Abnormal at any detectable level	such as agents reducing or ablating myostantin expression
Myostantin-binding proteins	Abnormal at any detectable level	None
Follistatin	Abnormal at any detectable level	None
Myostatin propeptide	Abnormal at any detectable level	None
Myostatin-neutralizing antibodies	Abnormal at any detectable level	None

Domagrozumab	Abnormal at any detectable level	None
landogrozumab	Abnormal at any detectable level	None
Stamulumab	Abnormal at any detectable level	None

METABOLIC MODULATORS. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Activators of the AMP-activated protein kinase (AMPK)	Abnormal at any detectable level	None
AICAR	Abnormal at any detectable level	None
SR9009	Abnormal at any detectable level	None
Peroxisome proliferator-activated receptor delta (PPAR) agonists	Abnormal at any detectable level	e.g., 2-(2-methyl-4-((4-methyl-2-(triflouromethyl)phenyl)thiazol-5-yl)methylthio)phenoxy)acetic acid
Insulins and insulin-mimetics	Abnormal at any detectable level	None
Meldonium	Abnormal at any detectable level	None
SR9011	Abnormal at any detectable level	None
GW1516	Abnormal at any detectable level	None
GW0742	Abnormal at any detectable level	None
Trimetazidine	Abnormal at any detectable level	None

6. DIURETICS AND MASKING AGENTS (PROHIBITED AT ALL TIMES).

Diuretics are drugs that increase the rate of urine flow and sodium excretion to adjust the volume and composition of body fluids. There are several major categories of this drug class, and the compounds vary greatly in structure, physicochemical properties, effects on urinary composition and renal hemodynamics, and site and mechanism of action. Diuretics are often abused by athletes to excrete water for rapid weight loss and to maskthe presence of other banned substances. Because of their abuse by athletes, the use of diureticsis banned both in competition and out of competition.

The following diuretics and masking agents and other substances with a similar chemical structure or similar biological effect(s) are prohibited. Including but not limited to:

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Acetazolamide	Abnormal at any detectable level	None
Altizide	Abnormal at any detectable level	None
Amiloride	Abnormal at any detectable level	None
Bendroflumethiazide	Abnormal at any detectable level	None
Benzthiazide	Abnormal at any detectable level	None
Benzylhydrochlorothiazide	Abnormal at any detectable level	None
Bumetanide	Abnormal at any detectable level	None
Canrenone	Abnormal at any detectable level	None
Chlorazanil	Abnormal at any detectable level	None
Chlorothiazide	Abnormal at any detectable level	None
Chlortalidone	Abnormal at any detectable level	None
Clopamide	Abnormal at any detectable level	None

Cyclopenthiazide	Abnormal at any detectable level	None
Cyclothiazide	Abnormal at any detectable level	None
Desmopressin	Abnormal at any detectable level	None
Dichlorphenamide	Abnormal at any detectable level	None
Dorzolamide	Abnormal at any detectable level	topical ophthalmic administration is ok
Epitizide	Abnormal at any detectable level	None
Eplerenone	Abnormal at any detectable level	None
Etacrynic Acid	Abnormal at any detectable level	None
Furosemide	Abnormal at any detectable level	None
Hydrochlorothiazide	Abnormal at levels greater than 20 ng/ml	None
Hydroflumethiazide	Abnormal at any detectable level	None
Indapamide	Abnormal at any detectable level	None
Methyclothiazide	Abnormal at any detectable level	None
Metolazone	Abnormal at any detectable level	None
Plasma Expanders	Abnormal at any detectable level	None
Albumin	Abnormal at any detectable level	Intravenous administration
Dextran	Abnormal at any detectable level	Intravenous administration
Hydroxyethyl starch	Abnormal at any detectable level	Intravenous administration
Mannitol	Abnormal at any detectable level	Intravenous administration
Polythiazide	Abnormal at any detectable level	None
Probenecid	Abnormal at any detectable level	None
Proguanil	Abnormal at any detectable level	None
Quinethazone	Abnormal at any detectable level	None
Spironolactone	Abnormal at any detectable level	None
Thiazides	Abnormal at any detectable level	None
Tolvaptan	Abnormal at any detectable level	None
Torsemide	Abnormal at any detectable level	None
Triamterene	Abnormal at any detectable level	None
Trichlormethiazide	Abnormal at any detectable level	None
Xipamide	Abnormal at any detectable level	None
Vaptans	Abnormal at any detectable level	None

EXCEPTIONS: Drospirenone, pamabrom; and topical ophthalmic administration of carbonic anhydrase inhibitors (e.g., dorzolamide, brinzolamide);
Local administration of felypressin in dental anesthesia.

NOTE: the detection in an athlete's sample of any quantity of the following substances subject to threshold limits: formoteral, salbutamol, cathine, ephedrine, methylephedrine, pseudoephedrine, in conjunction with a diuretic or masking agent, will be considered a violation of this prohibited drug list unless the athlete has an approved Therapeutic Use Exemption (TUE) for that substance in addition to the one granted for the diuretic or masking agent.

7. PROHIBITED METHODS (AT ALL TIMES)

MANIPULATION OF BLOOD AND BLOOD COMPONENTS

The following are prohibited:

a. The administration or reintroduction of any quantity of autologous, allogenic (homologous) or heterologous blood, or red blood cell products of any origin into the circulatory system.
b. Artificially enhancing the uptake, transport, or delivery of oxygen. Including but not limited to: Perfluorochemicals; efaproxiral (RSR13) and modified hemoglobin products, e.g., hemoglobin-based blood substitutes and microencapsulated hemoglobin products, excluding supplemental oxygen by inhalation.
c. Any form of intravascular manipulation of the blood or blood components by physical or chemical means.

CHEMICAL AND PHYSICAL MANIPULATION

The following are prohibited:

a. Tampering, or attempting to tamper, to alter the integrity and validity of samples collected. Including but not limited to: Sample substitution and/or adulteration, e.g., addition of proteases to the sample.
b. Intravenous infusions and/or injections except for those approved in advance by the Commission.

GENE AND CELL DOPING

The following, with the potential to enhance sport performance, are prohibited:

a. The use of nucleic acids or nucleic acid analogues that may alter genome sequences and/or alter gene expression by any mechanism. This includes but is not limited to gene editing, gene silencing, and gene transfer technologies.
b. The use of normal or genetically modified cells.

8. STIMULANTS (PROHIBITED IN-COMPETITION)

All stimulants, including optical isomers e.g., d- and l- where relevant, and other substances with similar chemical structure or similar biological effect(s), are prohibited. Including but not limited to:

Adrafinil	Abnormal at levels greater than 50 ng/mL	None
Amfepramone	Abnormal at levels greater than 50 ng/mL	None
Amfetamine	Abnormal at levels greater than 50 ng/mL	None
Amfetaminil	Abnormal at levels greater than 50 ng/mL	None
Amiphenazole	Abnormal at levels greater than 50 ng/mL	None
Benfluorex	Abnormal at levels greater than 50 ng/mL	None
Benzylpiperazine	Abnormal at levels greater than 50 ng/mL	None
Bromantan	Abnormal at levels greater than 50 ng/mL	None
Clobenzorex	Abnormal at levels greater than 50 ng/mL	None
Cocaine	Abnormal at levels greater than 50 ng/mL	None

Cropropamide	Abnormal at levels greater than 50 ng/mL	None
Crotetamide	Abnormal at levels greater than 50 ng/mL	None
Fencamine	Abnormal at levels greater than 50 ng/mL	None
Fenetylline	Abnormal at levels greater than 50 ng/mL	None
Fenfluramine	Abnormal at levels greater than 50 ng/mL	None
Fenproporex	Abnormal at levels greater than 50 ng/mL	None
Fonturacetam (4-phenylpiracetam (carphedon))	Abnormal at levels greater than 50 ng/mL	None
Furfenorex	Abnormal at levels greater than 50 ng/mL	None
Lisdexamfetamine	Abnormal at levels greater than 50 ng/mL	None
Mefenorex	Abnormal at levels greater than 50 ng/mL	None
Mephentermine	Abnormal at levels greater than 50 ng/mL	None
Mesocarb	Abnormal at levels greater than 50 ng/mL	None
Metamfetamine(d-)	Abnormal at levels greater than 50 ng/mL	None
p-methylamfetamine	Abnormal at levels greater than 50 ng/mL	None
Modafinil	Abnormal at levels greater than 50 ng/mL	None
Norfenfluramine	Abnormal at levels greater than 50 ng/mL	None
Phendimetrazine	Abnormal at levels greater than 50 ng/mL	None
Phentermine	Abnormal at levels greater than 50 ng/mL	None
Prenylamine	Abnormal at levels greater than 50 ng/mL	None
Prolintane	Abnormal at levels greater than 50 ng/mL	None
3-Methylhexan-2-amine (1,2-dimethylpentylamine)	Abnormal at levels greater than 50 ng/mL	None
4-Methylhexan-2-amine (methylhexaneamine)	Abnormal at levels greater than 50 ng/mL	None
4-flouromethylphenidate	Abnormal at levels greater than 50 ng/mL	None
4-Methylpentan-2-amine (1,3-dimethylbutylamine)	Abnormal at levels greater than 50 ng/mL	None
5-Methylhexan-2-amine (1,4-dimethylpentylamine)	Abnormal at levels greater than 50 ng/mL	None
Benzfetamine	Abnormal at levels greater than 50 ng/mL	None
Cathine (d-norpseudoephedrine)	Abnormal at levels greater than 5	None

and it's l-isomer	mcg/mL	
Cathinone and its analogues, e.g., mephedrone, methedrone, and α - pyrrolidinovalerophenone	Abnormal at levels greater than 50 ng/mL	None
Dimetamfetamine (dimethylamphetamine)	Abnormal at levels greater than 50 ng/mL	None
Ephedrine	Abnormal at levels greater than 10 mcg/mL	None
Epinephrine (adrenaline)	not prohibited in local administration	e.g., nasal, ophthalmologic, or co-administration with local anesthetic agents.
Etamivan	Abnormal at levels greater than 50 ng/mL	None
Ethylphenidate	Abnormal at levels greater than 50 ng/mL	None
Etilamfetamine	Abnormal at levels greater than 50 ng/mL	None
Etilefrine	Abnormal at levels greater than 50 ng/mL	None
Famprofazone	Abnormal at levels greater than 50 ng/mL	None
Fenbutrazate	Abnormal at levels greater than 50 ng/mL	None
Fencamfamin	Abnormal at levels greater than 50 ng/mL	None
Heptaminol	Abnormal at levels greater than 50 ng/mL	None
Hydrafinil (fluorenol)	Abnormal at levels greater than 50 ng/mL	None
Hydroxyamfetamine (parahydroxyamphetamine)	Abnormal at levels greater than 50 ng/mL	None
Isometheptene	Abnormal at levels greater than 50 ng/mL	None
Levmetamfetamine	Abnormal at levels greater than 50 ng/mL	None
Meclofenoxate	Abnormal at levels greater than 50 ng/mL	None
Methylenedioxymethamphetamine	Abnormal at levels greater than 50 ng/mL	None
Methylephedrine	Abnormal at levels greater than 10 mcg/mL	None
Methylnaphthidate (((+-) methyl-2-naphthalen-2-yl)-2-(piperidin-2-yl) acetate)	Abnormal at levels greater than 50 ng/mL	None
Methylphenidate	Abnormal at levels greater than 50 ng/mL	None
Nikethamide	Abnormal at levels greater than 50 ng/mL	None
Norfenefrine	Abnormal at levels greater than 50 ng/mL	None
Octodrine (1,5-dimethylhexyl-amine)	Abnormal at levels greater than 50 ng/mL	None
Octopamine	Abnormal at levels greater than	None

	1,000 ng/mL	
Oxilofrine (methylsynephrine)	Abnormal at levels greater than 50 ng/mL	None
Pemoline	Abnormal at levels greater than 50 ng/mL	None
Pentetrazol	Abnormal at levels greater than 50 ng/mL	None
Phenethylamine and its derivatives	Abnormal at levels greater than 50 ng/mL	None
Phenmetrazine	Abnormal at levels greater than 50 ng/mL	None
Phenpromethamine	Abnormal at levels greater than 50 ng/mL	None
Propylhexedrine	Abnormal at levels greater than 50 ng/mL	None
Pseudoephedrine	Abnormal at levels greater than 150 mcg/mL	None
Selegiline	Abnormal at levels greater than 50 ng/mL	None
Sibutramine	Abnormal at levels greater than 50 ng/mL	None
Strychnine	Abnormal at levels greater than 50 ng/mL	None
Tenamfetamine (methylenedioxyamphetamine)	Abnormal at levels greater than 50 ng/mL	None
Tuaminoheptane	Abnormal at levels greater than 50 ng/mL	None

EXCEPTIONS:

- Clonidine
- Imidazoline derivatives for dermatological, nasal or ophthalmic use (e.g., brimonidine, clonazoline, fenoxazoline, indanazoline, naphazoline, oxymetazoline, xylometazoline, Bupropion, caffeine, nicotine, phenylephrine, phenylpropanolamine, pipradrol, synephrine)

9. NARCOTICS (PROHIBITED IN-COMPETITION)

The following narcotics, including all optical isomers, e.g., d- and l- where relevant, are prohibited.

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Buprenorphine	Abnormal at levels greater than 2.5 ng/mL	None
Dextromoramide	Abnormal at levels greater than 25 ng/mL	None
Diamorphine (heroin)	Abnormal at levels greater than 25 ng/mL	None
Fentanyl and its derivatives	Abnormal at levels greater than 1 ng/mL	None
Hydromorphone	Abnormal at levels greater than 25 ng/mL	None
Methadone	Abnormal at levels greater than 25	None

	ng/mL	
Morphine	Abnormal at levels greater than 1,000 ng/mL	None
Nicomorphine		None
Oxycodone	Abnormal at levels greater than 25 ng/mL	None
Oxymorphone	Abnormal at levels greater than 25 ng/mL	None
Pentazocine	Abnormal at levels greater than 25 ng/mL	None
Pethidine	Abnormal at levels greater than 25 ng/mL	None

10. CANNABANOIDS (PROHIBITED IN-COMPETITION)

All natural and synthetic cannabinoids are prohibited.

a. In cannabis (hashish, marijuana) and cannabis products
b. Natural and synthetic tetrahydrocannabinols (THCs)
c. Synthetic cannabinoids that mimic the effects of THC

NOTE: abnormal at levels greater than 150 ng/mL
EXECPTIONS: Cannabidiol

11. GLUCOCORTICOIDS (PROHIBITED IN-COMPETITION)

All glucocorticoids are prohibited when administered by an injectable, oral (including oromucosal (e.g., buccal, gingival, sublingual)) or rectal route.

SUBSTANCE NAME/TYPE	DECISION LIMITS	EXCEPTIONS/NOTES
Betamethasone	Abnormal at levels greater than 30 ng/mL	None
Beclometasone	Abnormal at levels greater than 30 ng/mL	None
Budesonide	Abnormal at levels greater than 30 ng/mL	None
Ciclesonide	Abnormal at levels greater than 30 ng/mL	None
Cortisone	Abnormal at levels greater than 30 ng/mL	None
Deflazacort	Abnormal at levels greater than 30 ng/mL	None
Dexamethasone	Abnormal at levels greater than 30 ng/mL	None
Fluocortolone	Abnormal at levels greater than 30 ng/mL	None
Flunisolide	Abnormal at levels greater than 30 ng/mL	None
Fluticasone	Abnormal at levels greater than 30 ng/mL	None
Hydrocortisone	Abnormal at levels greater than 30	None

	ng/mL	
Methylprednisolone	Abnormal at levels greater than 30 ng/mL	None
Mometasone	Abnormal at levels greater than 30 ng/mL	None
Prednisolone	Abnormal at levels greater than 30 ng/mL	None
Prednisone	Abnormal at levels greater than 30 ng/mL	None
Triamcinolone acetonide	Abnormal at levels greater than 30 ng/mL	None

NOTE: other routes of administration (including inhaled, and topical: dental-intracanal, dermal, intranasal, ophthalmological, and perianal) are not prohibited when used within the manufacturer's licensed doses and therapeutic indications.

The New York State Athletic Commission does not recognize a therapeutic use exemption (TUE) fortestosterone replacement therapy.

Combatants are not to use any drugs, medications, and supplements between the time of the weigh-in physical and the conclusion of the combative sport event unless the combatant has provided notice to the New York State Athletic Commission (NYSAC) and received written approval.

The use of intravenous fluids for hydration prior to the event is not permitted unless the combatant has provided notice to the New York State Athletic Commission (NYSAC) and received written approval.

The Commission's policy is one of 'strict liability'. The combatant is responsible for anything that he/she puts in their body. If the combatant takes supplements and later tests positive, it is the combatant's responsibility. The combatant should be aware that the supplement industry is poorly regulated, and studies have shown that some supplements are contaminated with steroids. If a prohibited substance is detected in the combatant's sample – even if it was unintentional – it will resultin a violation of NYSAC rules.

NYSAC rules purport to provide the athlete a "right to a fair hearing" in case of a positive test/adverse analytical finding. The burden is on the athlete, to come forward with evidence that rebutsthe presumption of doping.